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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,274

04/07/2005

James John Schmitt

ACA6276P1US

4986

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7590

06/16/2008

AKZO NOBEL INC.

INTELLECTUAL PROPERTY DEPARTMENT

120 WHITE PLAINS ROAD 3RD FLOOR

TARRTOWN, NY 10591

EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

06/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,274	Applicant(s) SCHMITT ET AL.	
	Examiner TIMA M. MCGUTHRY-BANKS	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 1, 4, 5, and 7 are currently amended, Claims 2, 3, 10 and 11 are as previously presented, Claim 6 is as originally filed, and Claims 8 and 9 are withdrawn.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant gives support for an inorganic binder employed in an amount of 0.1-3% by weight and an organic binder in an amount of 0.0025-0.5% by weight. Applicant has neither support for an inorganic binder in an amount from 0.0025% to less than 0.1% nor for an organic

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binder in an amount greater than 0.5% to 3%. Applicant claims "an inorganic binder and/or an organic binder" (emphasis added).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al (US 4,919,711).

Banyai et al is applied as discussed in the office action mailed 17 September 2007. Regarding the amount of binder employed, the mixture contains about 0.022%-0.067% (Claim 1); in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP § 2144.05. Regarding the amount of binder additive, sodium tetraborate is 1.5 kg/tonne, or 0.15%.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al as applied to claim 1 above, and further in view of JP 02250929 A.

Banyai et al discloses the invention substantially as claimed. However, Banyai et al does not disclose that the binder additive is derived from ulexite, colemanite, Gerstley, Laguna Murray's Gillespie or mixtures thereof as claimed. JP '929 teaches a pellet comprised of iron and nickel ore, coke, lime and one kind among sodium borate, calcium borate, colemanite, etc (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute colemanite in the product of Banyai, since JP '929 teaches the equivalence of these boron-containing compounds for pelletizing iron ore for further reduction.

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Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt (US 5,698,007) in view of Franklin et al (US 3,205,063).

Schmitt teaches agglomerating particulate material such as iron ore (column 3, lines 17-20). The binder is a water-soluble polymer and includes alkali metal salts of carboxymethyl cellulose (lines 58 and 59). The agglomerate also includes borates (line 44). However, Schmitt does not specifically teach that the borates include sodium tetraborate or calcium tetraborate as claimed. Franklin et al teaches a method and composition for making carbonate-bonded agglomerates of iron ore, comprising the following composition:

Ore fines	77 to 96%.
Alkaline-earth metal compound	2 to 8%.
Water	2 to 15%.
Sodium tetraborate	Sufficient to produce a sodium content of 0.12 to 0.60%.

It would have been obvious to one of ordinary skill in the art at the time the invention was made that the borates in Schmitt would include sodium tetraborate, since Franklin et al teaches that a small amount of sodium tetraborate increases the solubility of CO₂ in the green agglomerates, thus enabling one to obtain satisfactory final agglomerates (column 1, lines 47-50).

Response to Arguments

The rejection of Claims 1-7, 10 and 11 under 35 U.S.C. 103(a) over CN '218 in view of SU '867, Stewart et al, and Lewis et al have been withdrawn. With respect to Claim 10, Digitalfire.com, Ceramics Monthly and JP '243 are no longer applied.

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With respect to the rejection of Claims 1-7 and 11 under 35 U.S.C. 103(a) over Banyai, applicant argues that Banyai teaches sodium tetraborate as a non-preferred and inferior embodiment. Patents are relevant as prior art for all they contain: A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Additionally, nonpreferred and alternative embodiments constitute prior art; disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. See MPEP § 2123.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. EP 196553 teaches using a boron compound, amongst which colemanite has proved to be the most effective, in a mineral-fiber board to reduce the evolution of carbon monoxide in the case of thermal decomposition of a binder. Roe et al (US 4,751,259) teaches compositions for agglomerating wetted metal-containing ores as shown below:

Ingredients	General % by Weight
A. A water-in-oil emulsion of a water-soluble vinyl addition polymer which contains at least 10% by weight of the water-soluble vinyl addition polymer	10-45
B. A polysaccharide	55-90
C. A water-soluble surfactant	0.001-10
D. Borax	0-15

Simpson (US 1,729,496) teaches making briquettes or non-molded lumps of comminuted minerals for metallurgical purpose, wherein the briquette includes borax (page 3, line 64).

Kamikawa et al (US 6,451,085 B1) teaches producing reduced iron by agglomerating a mixed

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powder of an iron material and a reducing agent to form compacts like briquettes or pellets (abstract). The compacts can also include boron oxide (column 5, line 19).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

/T. M. M./
Examiner, Art Unit 1793
16 June 2008